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POSTER PRESENTATION **Open Access**

Impact of gender on the prevalence and extent of microvascular obstruction after st-elevation myocardial infarction

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Background

Baseline characteristics of women suffering from ST-elevation myocardial infarction (STEMI) diverge compared to men. Therefore the presence and extent of microvascular obstruction (MO), which has been shown to be a prognostic marker for adverse clinical outcome after STEMI, might differ between genders. Up to date gender differences of MO after STEMI have not been evaluated.

Methods

STEMI patients reperfused by primary angioplasty (n=423) within 12 hours after symptom onset underwent contrast-enhanced-MRI at a median of 3 (interquartile range [IQR] 2;4) days after the index event. MO was measured 15 minutes after gadolinium injection with late enhancement sequences and evaluated qualitatively and quantitatively (as percentage of left ventricular mass [%LV]).

Results

A total of 105 women and 318 men were analysed (24.6 vs. 76.4%, p<0.001). In comparison to men, women were significantly older (71.5 [IQR 63.4;77.0] vs. 63.7 [IQR 54.0;71.0] years, p<0.001), displayed longer symptom-onset-to-reperfusion times (241 [IQR 156;389] vs. 196 [IQR 132;337] minutes, p=0.04), a higher prevalence of diabetes mellitus (35.9 vs. 23.3%, p=0.02) and arterial hypertension (76.7 vs. 65.6%, p=0.04). Complete epicardial reperfusion defined as post-PCI TIMI-flow III (95.2 vs. 95.2%, p=1.0) did not differ significantly between genders.

The prevalence and extent of MO, infarct size and left ventricular ejection fraction were similar in women and men (MO presence: 65.4 vs. 71.9%, p=0.22 / MO extent: 0.59 [IQR 0;1.24] vs. 0.71 [IQR 0;2.0] %LV, p=0.47; infarct size: 13.9 [IQR 5.8;25.6] vs. 18.4 [IQR 8.7;29.0] % LV, p=0.14; ejection fraction: 52.2 [IQR 42.6;60.0] vs. 49.4 [40.7;57.9] %, p=0.16).

Conclusion

Despite longer ischemic time and a more disadvantageous cardiovascular risk profile in women the prevalence and extent of MO do not differ between genders.

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